



Richland Electric Cooperative

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1027 North Jefferson Street

To: The Honorable Marlene Dortch, Secretary Federal Communications Commission & Staff

From: Shannon L. Clark, CEO & General Manager
Richland Electric Cooperative

Date: March 17, 2014

Subject: Expression of Interest – Rural Broadband Trials
Docket 10-90

Background

Richland Electric Cooperative is a member-owned rural electric distribution cooperative serving the greater Richland County Wisconsin area with electricity. Richland has also been involved in providing ISP services since 1994 to our rural community. Our mission statement includes the term “enhance the quality of life for people in our community.” No longer is broadband service an enhancement, it is an essential element in our daily lives.

Richland Electric Cooperative is one of approximately 840 electric distribution cooperatives located across 47 states and providing service to over 42 million Americans and over 18 million businesses, homes, schools, churches, farms and government installations and entities. We serve a sparsely populated area with only 3.4 members per mile of distribution line. We are located in the scenic ‘Driftless Area’ of Wisconsin. The Driftless Area is a small area which is ‘unglaciaded’ resulting in very rugged, hilly and forested terrain.

Richland Electric Cooperative is also a one-third owner of Tech Com, Inc. dba Genuine Telecom, a full service telecommunications provider which offers fiber-to-the-premise (FTTx), copper ADSL, ADSL 2+, VDSL and other facilities based plant to provide IP Video, Voice, Internet, and more.

We, along with the other two owners of Genuine Telecom, Richland Grant Telephone Cooperative and LaValle Telephone Cooperative have been consistently seeking new ways to extend services to rural areas in our community since 1998. Like other businesses that provide miles of infrastructure to remote areas, the economic challenges are daunting. To date, we have been successful in providing advanced telecommunication services to Richland Center, Wisconsin- the only city in Richland County. We are now focused on areas that are either unserved, or underserved by broadband due to either the lack of interest by the incumbent or due to the extremely low population density in our rural areas.

We believe that an experimental project in Richland County Wisconsin is an ideal candidate for developing a model that can work in other rural areas. We are experienced in leveraging the assets of an electric utility with the assets of existing telephone cooperatives. Genuine Telecom is successful because of our local expertise and years of institutional knowledge of not only technology, but construction challenges and providing service to low consumer density areas. The project is small enough to accomplish quickly but large enough to provide scalable solutions to others seeking to replicate such endeavors.

About Our Project

We believe that there are opportunities to serve rural residents and business in low population density areas by partnering electric and telephone providers and utilizing the existing expertise of both entities. We propose to develop a model which would be developed in the rural electric cooperative service area that is not served today, and areas served by investor owned utilities which are not served today. This includes portions of 2010 United States Census Tracts 9701, 9701,9703,9704,9705 which are located in Richland County, WI (State 55, County 103).

Like many rural areas, there are few anchor institutions included in direct connections to any proposed network as we have independently built these areas already. Our present network was designed so that we could build out to the less densely populated areas as technology costs came down. There would be indirect benefit to anchor institutions we already serve since our proposal would enable rural residents to utilize telemedicine services, perform electronic filings with governmental agencies such as USDA, perform online banking or seek higher education from local schools and universities—agencies which we have already enabled.

We would propose to continue to develop our FTTx services using either gigabit passive optical network (GPON) or Active Ethernet. In very limited and only in the most remote areas we may utilize wireless services but would seek to keep the wireless portion below 5% of total project connectivity.

Our projects will all be, except in rare instances, FTTx which today is the most scalable option and provides the best method for delivering services in the future. We seek a network that is all Internet Protocol (IP), something we are already experienced with deploying.

With the advent and rapidly evolving 'cloud' computing we see the need for synchronous data rates, consequently any FTTx deployment would by default be synchronous upload and download speeds.

Another advantage of our project is the ability to meet growing needs of electric utilities to modernize their networks as they deploy 'Smart Grid' technologies by enabling utility providers to transmit real-time or near real-time data. Furthermore, when the consumer is enabled, utilities can work with them on conservation efforts within their own home.

With appropriate support we can offer subscribers multiple levels of service. We propose to offer Residential services which will include email, web browsing, spam and virus filtering, web hosting, and cloud storage beginning at 25 mbps/synchronous for \$49.95 per month. Additional transfer rates of 50 mbps/synchronous and 100 mbps/synchronous would be available for \$59.95 and \$79.95 per month, respectively.

Telephone services, video services and other services are also available and would depend on the subscribers chosen packages. Basic telephone service would be available as VoIP or Traditional plain old telephone service with pricing starting as low as \$19.95 per month. Video services are highly dependent on the subscribers choices due to programming cost but basic broadcast services would be available for as low as \$17.95 per month. We currently have an agreement with a IP Video provider which offer over 180 channels of standard and high-definition video which could easily be offered on our expanded network.

We would expect to make service available to approximately 2500 households and 250 small businesses in the areas defined earlier. This would 'fill the gap' for all of Richland County that is presently unserved or underserved. We expect that any deployment would also include a significant broadband adoption effort which would include training, equipment financing, and a variety of educational programs and marketing.

Strong Local Support

Most of the rural townships of Richland County have developed comprehensive plans which recognize the need for expanded broadband. Coupling the support already provided through adoption of these plans with the access provided via electric utility right-of-way already obtained will result in minimal permitting or where necessary expedited permitting.

There are standing resolutions by various governmental bodies in Richland County including the county board, townships, villages and cities which support the build-out of broadband networks.

In our initial efforts, the City of Richland Center, partnered with Genuine Telecom to deploy a fiber-optic ring utilizing their right-of-way and utility infrastructure. That network now serves a variety of anchor institutions and will soon extend to serve a new waste-water treatment facility with its supervisory control and data acquisition (SCADA) needs.

Timetable

Any project made possible due additional funding could start within 4 weeks in areas that have been scoped and engineered but found to be not feasible due to density. To completely build out the remaining areas of Richland County that are not served would take approximately 18 months of construction time which could be accomplished if timed correctly within 24 months. Winter construction would not be performed as most facilities would need to be underground and Wisconsin winters make this extremely expensive and difficult.

We expect no regulatory challenges as Genuine Telecom and Richland Electric Cooperative are already authorized by their respective regulatory bodies for their portions of the projects.

Statement of Need

The rural residents of Richland County are not attractive to serve due to the consumer density and difficult geography. We are located nearly equidistant to Chicago, IL and Minneapolis, MN resulting in a consumer base that would like to have the opportunity to grow their businesses in an environment where there is ample work force but close to the natural beauty of our area. We are among the poorest counties in Wisconsin and are finding it difficult to attract and retain new workers due to our lack of amenities which rely on affordable broadband.

Residents and businesses in Richland County are not being afforded the opportunity to participate in the economy to the extent of their urban counterparts due to the high capital cost of deploying broadband to remote areas. Telephone cooperatives, including our partners have met the challenge with the support of USDA- Rural Utilities Services. We believe this model can be replicated and enhanced in other areas.

Existing Providers

Current providers in the area, but not in the entire area include;

Charter Communications. No facilities in the area we propose serving.

Frontier Communications. Copper facilities in the area we propose serving but limited broadband service due to distance.

Richland Grant-Telephone Cooperative- Fully serving broadband needs of their areas so we would not build those areas.

LaValle Telephone Cooperative- Fully serving broadband needs of their areas so we would not build those areas.

Hillsboro Telephone Company- Fully serving broadband needs of their areas so we would not build those areas.

LaValle Telephone Cooperative- Fully serving broadband needs of their areas so we would not build those areas.

Verizon Wireless- Several areas served via 3G, 4G, LTE but lacks geographic coverage due to terrain.

Wi-Connect- A wireless ISP which serves areas where topography permits but speeds are limited due to the limitations of point-to-multipoint unlicensed spectrum capability.

We have been in regular contact with all of the providers to determine their desires and intentions to reach these last remaining consumers and to date, it appears that no significant build-outs to unserved or underserved areas are planned.

What We Are Asking

We continue to refine the exact requirements to meet our project goals. To date, we have invested, with our partners over \$5 million to build our core components and the more densely populated area of Richland Center, WI. We are now focused solely on the sparsely populated rural area that is unserved or underserved.

Through the use of Genuine Telecom Central Office facilities, existing fiber optic facilities of our partners and through the use of Wisconsin Independent Network facilities we have the opportunity to fill in the holes of a rural area. Various network facility needs of not only our project, but of neighbors we believe we are at the point where last mile needs are the final obstacle.

Our modeling indicates the need to construct approximately 735 miles of single-mode fiber optic facilities. This is consistent with our electric cooperative consumer density of 3.4 members per mile of electric line. These facilities would make available broadband services to over 2750 residential and business premises.

Our experience indicates construction cost will be approximately \$22,000 to \$30,000 per route mile for installation with the variances being related to either wetlands or rock. Total fiber construction would then be approximately \$16 to \$22 million. Consumer premise equipment at a 50% take rate would add an additional \$350,000 and electronic distribution equipment would add \$500,000 to the project.

The total project cost could be reasonably expected to be \$25 million or just over \$9000 per home or business passed. Again, these numbers are heavily influenced by the low consumer density and local topography

Total Estimated Project Cost:	\$25 Million
Richland Electric Cooperative Investment:	\$2 Million
FCC Investment (one-time Cap Ex)	\$18 Million
Additional Financing	\$5 Million

The model is driven by a reasonable market based rate for service and the affordability of the service for rural residents. In order to maintain a reasonable consumer bill significant grant funds are needed to make the business sustainable. The assumed long-term financing rate used was 5% annually.

There are certainly other models which could be utilized which would rely on on-going price support and Richland would consider such an approach, however for the purposes of this submittal, a one-time investment is considered the most reasonable.

If you have any questions or would like to discuss this project in greater detail we would welcome your inquiries by phone to 608-647-3173 or we would welcome a visit to see first-hand the challenges of a rural community seeking broadband solutions.

Sincerely,

RICHLAND ELECTRIC COOPERATIVE



Shannon L. Clark
CEO & General Manager